### PATENT APPLICATION

### IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re application of )								
Applicant: Bernier et al.	, )							
Title: Chemical Composition that	Group Art Unit:							
Attract Arthropods	) ) Examiner: )							
Serial No.:	, ) )							
Docket No.: 0148.01	) )							
Filed:	) )							
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## DISCLOSURE STATEMENT PURSUANT TO 37 C.F.R. 1.56

Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

In compliance with 37 C.F.R. 1.56 Applicants herewith submit documents believed to be relevant to the above-identified patent application. The documents are listed on form PTO-1449 attached hereto. A copy of each document is enclosed.

This Disclosure Statement is not to be construed as a representation that: (i) a search has been made; (ii) additional information material to the examination of this application does not exist; or (iii) the above information constitutes prior art in the subject invention.

### REFERENCES

- 1. Saini et al., "A Behavioural Bioassay to Identify Attractive Odours for Glossinidae", (Medical and Veterinary Entomology, (1987), Vol. 1, No. 3, pp. 313-18), STN/CAS online, file Medline, Abstract.
- 2. Mihok et al., "Trials of Traps and Attractants for Stomoxys spp. Diptera: Muscidae", (Journal of Medical Entomology, (1995) Vol. 32, No. 3, pp. 283-89). STM/CAS online, file BIOSIS, Abstract.
- 3. Voskamp et al., "Olfactory Responses to Attractants and Repellants in Tsetse", (Medical and Veterinary Entomology, (1999) Vol. 13, No. 4, pp. 386-92), STN/CAS online, file BIOSIS, Abstract.
- 4. Laye et al., "Chemical, Microbiological and Sensory Properties of Plain Nonfat Yogurt", (1993), (Journal of Food Science, Vol. 58, No. 5, pp. 991-95.)
- 5. Granata et al., "Improved Acid, Flavor and Volatile Compound Production in a <u>High Protein and Fiber Soymilk Yogurt-like Product"</u>, (1996), (Journal of Food Science, Vol. 61, No. 2, pp. 331-36.)
- 6. Hosono et al., "Metabolism of Brevibacterium Linens and Its Application." (Rakuno Kagaku N<u>o Kenkyu(19</u>69), Vol. 18, No. 6, pp. Al64-Al69), STN/CAS online, file CAPLUS, Abstract.)
- 7. Hansen et al., "Flavour of Sourdough Rye Bread Crumb", (1989), Lebensm.-Wiss.u.-Technol.., Bol. 22, pp. 141-144.)
- 8. Smith et al., (L-lactic Acid as a Factor in the Attraction of Aedes Aegyptic (Diptera: Culicidae) to Human Hosts, Ann. Entomol. Soc. Amer. (1970), Vol. 63, No.3, pp. 760-70.)

# Respectfully submitted,

May 3, 2001

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Enclosures PTO-1449 (2 sheets) 8 References

cc:

H. Silverstein

U. Bernier

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EXAMINER: Initial if citation is considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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·	Smith et al., (L-lactic Acid as a Factor in the Attraction of Aedes Aegyptic (Diptera: Culicidae) to Human Hosts, Ann. Entomol. Soc. Amer. (1970), Vol. 63, No.3, pp. 760-70.)														
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# IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re application of	)				
Applicant: Ulrich R. Bernier et al.	.) )	Group A	3	IInit:	
Title: Chemical Composition that Attract Arthropods	) ) )	Group	ALC	Ollic.	
Serial No.:	)				
Docket No.: 0184.03	)				
Filed:	,				

# DISCLOSURE STATEMENT PURSUANT TO 37 C.F.R. 1.56

Mail Stop PATENT APPLICATION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

### Sir:

In compliance with 37 C.F.R. 1.56 Applicants herewith submit documents believed to be relevant to the above-identified patent application. The documents are listed on form PTO-1449 attached hereto. A copy of each document is enclosed.

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### **REFERENCES**

- U.S. Patent No. 5,943,815, Paganessi. J., et al., March 14, 1997.
- 2. Eugene W. Seitz, "Microbial and Enzyme-Induced Flavors in Dairy Foods", <u>J. Dairy Sci.</u>, Vol. 73, pp. 3664-3691, (1990).
- 3. STN/CAS online, file CROPU, Acc. No. 1998-89883 (Kline et al., J. Am. Mosq. Control Assoc., Vol. 14(3), pp. 289-297 (1998)), Abstract.

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Date

Respectfully submitted,

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Enclosures PTO-1449 (1 page) 3 References

cc: J. Fado

U. Bernier.

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U.S.	PATENT	DOCUMENTS
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•	4 166 112	08/28/1979	Goldberg, L.J.	424	93 ·	03/20/78		
	_ 4,166,112	02/05/1980	Jenkin, W.C.	252	472	06/20/78		
-	_ 4,187,200	04/04/1989	Wilson, R.A., et al.	424	84	08/29/86		
	_ 4,818,526	03/13/1990	Balfour, R.S.	43	132.1	09/27/89		
	_ 4,907,366	08/19/1997	Vrba, J., et al.	128	653.1	06/07/95		
	_ 5,657,756 _ 5,679;364	10/21/1997	Levy, R.	424	405	06/07/95		
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			"L-Lactic Acid: A Monq 1346-1347, (Sept. 2'',	1968)				
	Bar-Zeev, I Culicidae) 20, 1977)	M., et al., " to Man", Jour	Studies on the Attract nal of Medical Entomal	ogy. 14	(1), 113	-120, (Aug.		
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:.	Bernier, J.R., et al., "Analysis of Human Skin Emanations by Gas Chromatography/Mass Spectrometry. 1. Thermal Desorption of Attractants for the Yellow Fever Mosquito (Aedes aegypti) from Handled Glass Beads", Analytical Chemistry, 71 (1), Accelerated Articles, 1-7 p., (Jan. 1, 1999)							
	7-11- V F	at al HT	actic Acid Sensitive R s", Journal of Insec:	eceptors	in the A	Autogenous		

Examiner	 Date	Considered
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Malaria Mosquito Anopheles gambiae Sensu Stricto", Journal of Chemical

Temperature and Insect Repellents", Journal of Medical Entomology, 29 (2),

(1999)

663-672,

"Incubated Human Sweat But Not Fresh Sweat Attracts the

"Carbon Dioxide Released from Human Skin: Effect of

165-170,

Braks, M.A., et al.,

Carlson, D.A., et al.,

(1992)

Ecology, 25 (3),

<sup>\*</sup>Substitute Disclosure Statement Form (PTO-1449)

<sup>\*\*</sup>EXAMINER. Initial if citation considered, whether or not citation is in conformance with MPEP 609, Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form 1449*	Atty. Docket No.: 862.003 JS1	Serial No. 09/304,362
INFORMATION DISCLOSURE STATEMENT	Applicant: Ulrich R. Berni:r et al.	
BY APPLICANT (Use several sheets if necessary)	Filing Date: May 4, 1999	Group: 1614
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•	Carlson, D.A., et al., "Yellowfever Mosquitces: Compounds Related to Lactic Acid that Attract Females", <u>Journal of Economic Entomology</u> , 66 (2), 329-331, (April 1973)
ر	Charlwood J.D., et al., "Mosquito-Mediated Attraction of Female European but not African Mosquitoes to Hosts", Annals of Tropical Medicine and Parasitology, 89 (3), 327-329, (1995)
<u> </u>	Davis, E.E., "Development of Lactic Acid-Receptor Sensitivity and Host-Seeking Behaviour in Newly Emerged Female Aedes Aegypti Mosquitoes", Journal of Insect Physiology, 30 (3), 211-2:5, (1984)
_	Davis, E.E., "Structure-Response Relationsh:p of the Lactic Acid-Excited Neurones in the Antennal Grooved-Peg Sensilla of the Mosquito Aedes Aegypti", Journal of Insect Physiology, 34 (6), Printed in Great Britain, 443-449, (1988)
	de Jong, R., et al., "Olfactory Responses of Host-Seeking Anopheles gambiae s.s. Giles (Diptera: Culicidae)", Acta Tropica, 59, 333-335, (1995)
	De Jong, R., et al., "Selection of Biting Sites on Man by Two Malaria Mosquito Species", Experentia 51, 80-84, (1.995)
_	Eiras, A.Z., et al., "Host Location by Aede: aegypti (Diptera: Culicidae): a Wind Tunnel Study of Chemical Cues", Bulletin of Entomological Research, 81, 151-160, (1991)
•	Eiras, A.E., et al., "Responses of Female Addes aegypti (Diptera: Culicidae) to Host Odours and Convection Currents Using an Olfactometer Bioassay", Bulletin of Entomological Research, 84, 207-211, (1994)
_	Geier, M., et al., "A search for Components in Human Body Odour that Attract Females of Aedes Aegypti", Ciba Foundation Symposium 200 on Olfaction in Mosquito-Host Interactions, 132-148, (1996
	Gilles, M.T., "The Role of Carbon Dioxide in Host-Finding by Mosquitoes Diptera: Culicidae) a review", Bulletin of Intomological Research, 70 (1), 525-532, (March 1980)

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\*\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with mext communication to applicant.

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-	Guock, H.K., et al., "Responses of Mosquitoes and Stable Flies to a Man in a Light-Weight Rubber Diving Suit", <u>Journal of Economic Entomology, 55 (3)</u> , 386-392, (1962)							
•••	Ikeshoji, T., "Synergistic Effect of Lactic Acid with a Chemosterilant Metepa to the Sound-Attracted Male Mosquito", Jpn Sanit. Zool., 38 (4), 333-338, (1987)							
	Volatiles from Limburger	Responses and Field Attracti Cheese and Human Foot Odor", , (Dec. 1998)	on of Mosquitoes to Journal of Vector					
_	Dioxide Honey Extract, 1	eld Studies on the Potential -octen-3-ol, L-Lactic Acid a and Veterinary Entonology, 4	nd Augusta, as writacranes					
	Knols, B.G., et al., "Be	and the second s						
,-	Mosquito Anopheles gambia (1996)	mburger Cheese as an Atrract e s.s.", <u>Parasitology Today</u> ,	12 (4), 159-161,					
	Mboera, L.E., et al., "O Say (Diptera: Culicidae) Ecology, 23 (2), 107-113	lfactory Responses of Female in a Dual-Choice Olfactomete , (Dec. 1998)	Culex quinquefasciatus r", <u>Journal of Vector</u>					
	Waga17 D T at al 88	ttraction and Trapp:.ng of Aes in the Laboratory", Journa	des aegypti (Diptera: l of Medical Entomology,					
		iple Cage Olfactometer for E	valuating Mosquito					

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Examiner		Date Considered

383-395,

Price, G.D., et al., "The Attraction of Female Mosquitoes (Anopheles

<u>(3)</u>, 330-334, (1998)

\*Substitute Disclosure Statement Form (PTO-1449)

Chemical Ecology. 5 (3),

(Diptera: Culicidae) Attraction Responses", Nournal of Medical Entomology, 35

quadrimaculatus SAY) to Stored Human Emanations in Conjunction with Adjusted Levels of Relative Humidity, Temperature, and Carbon Dioxide", Journal of (1979)

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	Rudolfs, W., "Chemotropism of Mosquitoes", New Jersey Agricultural Experiment Stations, Bulletin 367, New Brunswick, NJ, 1-23 p., (March 1922)					
	Schreck, C.E., et al., "A Material Isolated from Human Hands that Attracts Female Mosquitoes", Journal of Chemical Ecology, 8 (2), 429-438, (1981)					
	Schreck, C.E., et al., "Mosquito Attraction to Substances from the Skin of Different Humans", <u>Journal of the American Mosquito Control Association</u> . 6 (3), 406-410, (Sept. 1990)					
	Takken, W., "The Role of Olfaction in Host-{eeking of Mosquitoes: A Review", Insect Sc: Applic., 12 (1/2/3), 187-294, 1991)					
_	Takken, W., et al., "Carbon Dioxide and 1-(cten-3-OL as Mosquito Attractants", Journal of the American Mosquito Control Association, 5 (3), 311-316, (Sept. 1989)					
-	Takken, W., et al., "Odor-Mediated Behavior of Afrotropical Malaria Mosquitoes", Annu. Rev. Entomol., 44, 131-157, (1999)					
	Takken, W., et al., "Odor-Mediated Flight Behavior of Anopheles gambiae Giles Sensu Stricto and An. stephensi Liston in Response to Carbon Dioxide, Acetone, and 1-Octen-3-ol (Diptera: Culicidae)", Journal of Insect Behavior, 10 (3), 395-407, (May 1997)					
	Vale, G.A., et al., "The Use of 1-octen-3-o., Acetone, and Carbon Dioxide to Improve Baits fot Tsetse Flies, Glossina spp (Diptera: Glossinidae)", Bull. ent. Res., 75, 219-231, (1985)					
	Van Essen, P.H., et al., "Differential Responses of Aedes and Culex Mosquitoes to Octenol or Light in Combination with Carbon Dioxide in Queensland, Australia", Medical and Veterina: Y Entomology, 63-67, (1993)					
	Wensler, R.J., "The Effect of Odors on the Behavior of Adult Aedes aegypti and Some Factors Limiting Responsiveness", Cim. J. Zool., 50, 415-420, (1972)					
-	Willis, E.R., et al., "Reactions of Aedes Aggypti (L.) to Carbon Dioxide", J. Exp. Zool., 121, 149-179, (1952)					

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<sup>\*</sup>Substitute Disclosure Statement Forth (1800 (149

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